

TITLE

CATALYSTS FOR OLEFIN POLYMERIZATIONS

Abstract of the Disclosure

5 Transition metal complexes of selected monoanionic  
phosphine ligands, which also contain a selected Group 15 or  
16 (IUPAC) element and which are coordinated to a Group 3 to  
11 (IUPAC) transition metal or a lanthanide metal, are po-  
lymerization catalysts for the (co)polymerization of olefins  
10 such as ethylene and  $\alpha$ -olefins, and the copolymerization of  
such olefins with polar group-containing olefins. These and  
other nickel complexes of neutral and monoanionic bidentate  
ligands copolymerize ethylene and polar comonomers, espe-  
cially acrylates, at relatively high ethylene pressures and  
15 surprisingly high temperatures, and give good incorporation  
of the polar comonomers and good polymer productivity. These  
copolymers are often unique structures, which are described.